

**Early 2010 review of progress in implementing the 2009-2011 biennial science work plan (identified as items 2.1.1 through 3.2.7) and science-dependent near-term actions from the Action Agenda (identified as NTA #.#)**

BSWP action / Near-term Action (NTA)	February 2010 Status	Need / Gap
Analyze existing and evolving information with the best available tools		
2.1.1 Continue existing monitoring (NTAs E.3.1 and E.1.15)	PSAMP studies continue; no oversight by committees; some cuts underway or proposed to some studies (PSAMP and other)	Oversight and coordination of existing monitoring –through development of coordinated monitoring program
2.1.2.1 Inform development of ecosystem indicators through IEA process and Phase 2 of indicator project (part of NTA E.3.3; related to NTA E.1.3)	NWFSC projects on IEA and Phase 2 indicators. Phase 2 indicators effort used to inform PSP 2009 work on open standards and reporting indicators  PS Science Update Section 1 linkage to NWFSC IEA	Understand timing and deliverables from NWFSC projects and their and others' ideas of next steps -- facilitated by PSP science staff working on IEA coordination?
2.1.2.2 Evaluate current status and primary threats and drivers to indicators across the system (part of NTA E.3.3)	NWFSC project on marine food web and marine-watershed linkages.  PS Science Update sections 2 and 3	Understanding timing and deliverables from NWFSC projects and their and others' ideas of next steps – facilitated by PSP science staff working on IEA coordination?
2.1.2.3 Coordinate IEA efforts (part of NTA E.3.3)	PSP science staff position funded (part of 1 FTE for 1 year); awaiting hire of Science Program Dir.	Science Program Director develops staffing plan and recruits and fills to address this need  Funding to extend beyond first year
2.1.2.4 Explore potential future conditions through future scenarios modeling (part of NTA E.3.3)	PSP science staff position funded for coordination (part of 1 FTE for 1 year); awaiting hire of Science Program Dir.  PSNERP findings from future risk assessment project available and being used to depict effects on ecosystem components	Science Program Director develops staffing plan and recruits and fills to address this need  Funding to extend coordination beyond first year and to extend FRAP to other scenarios, endpoints, etc.

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<b>Conduct priority scientific investigations</b>		
2.2.1 Conduct scientific investigations in support of adaptive management for nearshore restoration (part of NTAs E.3.4 and B.1.2)	<p>ESRP and SRFB coordinating approaches to monitoring effectiveness of nearshore restoration projects</p> <p>PSNERP developing a monitoring and adaptive management approach</p> <p>PSP staff and SP members have plans to convene restoration program managers and stimulus-funded project managers</p>	<p>Funding for studies</p> <p>Coordinate work by SRFB, ESRP, PSNERP, NOAA, and others to develop collaborative, complementary approaches.</p> <p>Obtain funding for coordinated monitoring of restoration projects</p> <p>Describe information flows to ensure learning and adaptation</p>
2.2.2 Conduct scientific investigations of watershed-wide pollutant loading and effects of surface water runoff (part of NTA E.3.4)	<p>Stormwater work group's study design and implementation plan to be completed by June 2010</p> <p>Surface runoff projects within toxics loading study (especially Phase 3 project in 2 basins)</p> <p>ENVVEST in Sinclair/Dyes</p>	<p>Funding for studies</p> <p>Coordination of Stormwater Work Group design &amp; plan with other efforts</p>
2.2.3 Conduct scientific investigations of stressors affecting the Puget Sound pelagic food web and forage fish restoration (part of NTA E.3.4)	<p>PSAMP fish contaminants and effects studies</p> <p>NWFSC IEA modeling of marine food web</p> <p>PSNERP studies</p>	<p>Funding for studies</p> <p>Convene work group to clarify timing and deliverables from various efforts and discuss next steps</p>
2.2.4 Conduct scientific investigations of ecosystem services and socioeconomic indicators (part of NTA E.3.4)	PS Science Update Section 1 and 2B	<p>Funding for studies</p> <p>Convene work group to discuss next steps?</p>
<b>Synthesize, integrate, and communicate the current best answers to the Action Agenda four questions</b>		
2.3.1 Prepare 2009 State of the Sound (NTA E.3.5)	Completed ecosystem status background document and ecosystem status section of SOS in October 2009	Based on findings of PS Science Update and development of PSP performance management system develop 2011 SOS

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2.3.2 Prepare 2010 Puget Sound Update (NTA E.3.6)	Author teams preparing sections 1, 2A, 2B, 3, and 4 for production of peer-reviewed documents by April or June 2010	Firm up approach to synthesis section (or separate document) and summary of policy makers  Maintaining wiki and develop future version of synthesis and summary
Create and enhance the elements of a sustained science program		
3.1.1.1 Support ongoing efforts to improve ecosystem monitoring in Puget Sound regions (part of NTAs E.3.2 and E.1.11; also NTA C.2.1)	Bruce Wulkan of PSP staff active member of Stormwater Work Group  Rebecca Ponzio and David St. John active with RITT and others in developing salmon recovery monitoring and adaptive management plans (using Open Stds at watershed scale)  Jim Cahill represents PSP at Washington Monitoring Forum  River & stream status and trend monitoring baseline Puget Sound in 2009; remote sensing pilot in 3 PS watershed funded by SRFB in late 2009	Link these efforts into developing coordinated monitoring program  Switch PSP representative on the Washington Monitoring Forum to Science Program Director or Nathalie Hamel?
3.1.1.2 Develop and implement a coordinated regional monitoring program (part of NTA E.3.2)	Nathalie Hamel on PSP staff as of 2/1/10  SP discussion of program development at February meeting  LC will discuss governance of program at PSP or at independent institute in July 2010	Develop Steering Committee, work groups and technical committee  Funding for PSP staff & work group coordination
3.1.2.1 Participate in modeling/assessment work groups (part of NTA E.3.8)	ad hoc (perhaps participation by some SP members: Newton? Johnston?)	Define expectations for staff and SP members  Science Program Director develops specific plan

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3.1.2.2 Develop capability for modeling of future scenarios and predicting ecosystem effects of management strategies (NTA E.3.10)	Funded as part of IEA-modeling science staffer at PSP; awaiting Science Program Dir.	Science Program Director develops staffing plan and recruits and fills to address this need
3.1.3.1 Identify emerging research needs (parts of NTA E.3.11 and E.3.7)	Nothing specific but expect this will be covered for 2010 by PS Science Update sections and synthesis	Confirm 2010 approach via PS Science Update and discuss additional work needed in advance of next BSWP
3.1.3.2 Develop and issue an RFP reflecting emerging research needs (part of NTA E.3.11)	Not begun – no funds allocated to this	Work with EPA, Sea Grant, others, to define possible approaches
3.1.4.1 Develop a science education, training and outreach assistance framework (related to NTA E.3.8)	Not begun	
3.1.4.2 Provide access to scientific expertise and translation of scientific content (related to NTAs E.3.8 and E.4.2)	Not begun	
3.1.4.3 Explore opportunities for Puget Sound intern and fellowship programs (related to NTA E.3.8)	Not begun	
3.1.5.1 Establish information management working group (part of NTA E.1.6)	Not begun – although a related group meets to advise PSP's exchange network grant	Clarify path if chief IT officer position no longer being pursued
3.1.5.2 Develop information management detailed work plan (part of NTAs E.1.6 and E.1.15)	Not begun	Clarify path if chief IT officer position no longer being pursued
3.1.5.3 Participate in information management working group (part of NTA E.1.6)	Not begun	
3.1.5.4 Develop data exchange for key data sets (part of NTA E.1.14)	PSP's exchange network grant is advancing data exchange for juvenile salmon information. Second flow not decided as of Jan 2010	Decide 2 <sup>nd</sup> flow and identify other key data sets for exchange flows.
3.1.5.5 Implement information exchange network (parts of NTA E.1.14 and E.1.15)	Proceeding only through PSP's exchange network grant: 2 new flows and a PSP client application.	Need to clarify staffing approach and importance & urgency. Needs working group and CITO-type lead.

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<b>Organization and procedures</b>		
3.2.1 Complete Strategic Science Plan (part of NTA E.3.8)	Review version complete and posted on web in Jan 2010  Comments to be discussed by SP at April meeting	Consider comments and revisions; SP send to LC for formal adoption
3.2.2 Develop process for soliciting science efforts via competitive RFPs (part of NTA E.3.9)	Funds for setting up peer review process at PSP – awaiting Science Program Dir.	
3.2.3 Establish procedures for timely peer review of technical material used by the Partnership (part of NTA E.3.9)	Funds for setting up peer review process at PSP – awaiting Science Program Dir.	
3.2.4 Establish processes for periodic external review of the overall science program; possibly coordinated with WSAS “assessment of basin-wide restoration progress” (part of NTA E.3.9)	Proposal to accomplish periodic review via WSAS assessment in discussion within PSP in Jan 2010. First assessment in 2011?	Agreement on timing and WSAS approach  Funds and scope for 2011 assessment
3.2.5 Oversee Partnership-sponsored science (part of NTA E.3.8; related to NTA E.4.2)	SP through this sheet and periodic discussions of science work  SP members by individual engagement?  SP members by engagement in cross-Partnership work groups	Clarify: what is Partnership-sponsored science in 2009-11? (see last page of this sheet) what elements need oversight?  Clarify staff and SP and SP member roles in oversight
3.2.6 Develop working groups to support implementation of BSWP activities (part of NTA E.3.8)	Not begun, not funded beyond some contract funds for monitoring program development	Funds for work group coordination
3.2.7 Coordinate with science programs of state and federal agencies (NTA E.3.12)	Not begun	Clarify needs and expectations for staff, SP, members
<b>Near-term Actions (NTAs) requiring science oversight of work plan and execution</b>		
NTA A.1.3 Complete watershed assessments to identify sites and functions for protection		
NTA A.3.3 Develop and implement flow protection and enhancement programs		
NTA A.5.3 Develop a Puget Sound baseline and database of invasive species		

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NTA A.5.4 Enhance and target capacity to respond to invasive species risks		
NTA D.1.6 Implement priority hatchery reform recommendations		
NTA E.1.1 Clarify role of LC, ECB, SP		
NTA E.1.2 Revise NTAs		
NTA E.1.3 Develop specific benchmarks for outputs, intermediate outcomes, and environmental outcomes		
NTA E.1.4 Develop a detailed work plan for NTAs		
NTA E.1.7 Convene a performance management working group to design systems		
NTA E.1.8 Develop an activity integration database to support accountability		
NTA E.1.9 Develop a schedule and process to update the NTAs and revise Action Agenda strategies		
NTA E.1.12 Develop a system to identify and track actions that are inconsistent with the Action Agenda		
NTA E.2.12 Develop proposals for 2011-13 for use of ecosystem markets		
NTA E.2.13 Implement a cap-and-trade program for the removal of impervious surface and/or shoreline armoring		
NTA E.4.10 Develop and implement a coordinated citizen science program		
<b>Near-term Actions (NTAs) that require coordination of expertise and peer review</b>		
NTAs in Priority A with need for science expertise and review: <ul style="list-style-type: none"> <li>• prepare criteria for acquisition/protection</li> <li>• define no-net-loss for use in guidance to local governments</li> <li>• set and update flow rules</li> <li>• define immediate risk of conversion for working lands</li> </ul>		

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NTAs in Priority B with need for science expertise and review: <ul style="list-style-type: none"> <li>• define processes with high likelihood of re-creating function</li> <li>• define significant blockages to fish habitat</li> <li>• demonstrate clean up and restoration at Port Angeles</li> <li>• coordinate cleanup of Bellingham Bay</li> <li>• control and remediate pollution in Duwamish</li> </ul>		
NTAs in Priority C with need for science expertise and review: <ul style="list-style-type: none"> <li>• implement immediate remediation actions to address Hood Canal low D.O.</li> <li>• implement priority strategies to address low D.O. in S. Sound, Whidbey basin, and elsewhere</li> <li>• retrofit stormwater systems</li> <li>• define nutrient sensitive and shellfish recoverable areas for advanced wastewater treatment</li> <li>• develop and implement on-site sewage system management plans in each county</li> <li>• define areas with loading issues or vulnerability to be targeted by on-site sewage treatment loan and grant programs</li> <li>• implement remediation and clean-up projects</li> <li>• refine prioritization criteria for site clean ups</li> </ul>		
NTAs in Priority D with need for science expertise and review: <ul style="list-style-type: none"> <li>• coordinate implementation of existing plans and programs</li> <li>• integrate and coordinate recommendations of climate change study groups</li> <li>• integrate work of PSNERP &amp; ESRP in Partnership</li> </ul>		

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NTAs in Priority E with need for science expertise and review: <ul style="list-style-type: none"> <li>• negotiate performance agreements with implementers</li> <li>• review and approval of Action Agenda as required by NEP</li> <li>• increase training for education and outreach providers in up-to-date tools and techniques</li> </ul>		